

subject matter of new dependent claim 25 has support in the specification at as a non-limiting example, on page 8, lines 27-28.

Discussion of Claim Rejections Under 35 U.S.C. §§ 102(a) and 103(a)

In the Office Action, the Examiner rejected Claims 1, 3, and 19 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,692,081 to Takahashi (hereinafter Takahashi). Claims 2, 4-10, 14-18, 20, and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi in view of U.S. Patent No. 6,343,166 to Hellman, et al (hereinafter Hellman). Claims 11-13 are rejected under 35(a) as being unpatentable over Takahashi, and Hellman in view of Japanese Patent No. 61070521, to Umeki (hereinafter Umeki). Claim 22 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi in view of U.S. Patent No. 6,048,102 to Fukushima (hereinafter Fukushima).

One embodiment of the present invention provides an optical coupling module capable of reducing polarization dependent loss (PDL). In one embodiment, the optical coupling module has a ferrule made of a synthetic resin. Since the ferrule is made of a synthetic resin, fiber holes can be formed with high precision and with ease, and as a consequence, the polarization dependent loss (PDL) can be greatly reduced. The module can be used as an optical coupler, an optical divider, an optical isolator, an optical circulator, an optical multiplexer or an optical demultiplexer. Claim 23 recites, among other limitations: "*a ferrule made of a synthetic resin, for supporting the one end of said optical fiber, said ferrule including a body with two end faces, and at least one through hole formed in the body, the through hole extending between the two end faces and having a first end portion into which the one end of said optical fiber is received, and a second end portion being larger than the first end portion.*"

Applicant respectfully submits that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. See M.P.E.P. § 2131. Furthermore, to establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. See M.P.E.P. § 2143.03. Applicant respectfully submits that the cited references fails to teach or suggest "*a ferrule made of a synthetic resin.*"

Takahashi discloses a ferrule for supporting optical fibers. However, Takahashi's ferrule is made of a sintered zirconia ceramic material. *See* Takahashi, col. 6, lines 27-28. Applicant respectfully submits that sintered zirconia is not a synthetic resin and thus is not equivalent to the Applicants' ferrule made of a synthetic resin. As is known, sintered zirconia is an inorganic material. Takahashi also discloses the epoxy resin 5 for bonding an optical fiber to the lens. However, Takahashi does not teach or suggest incorporating the epoxy resin 5 as part of the manufacturing material of the ferrule. The ferrule is used for receiving and supporting bare distal ends of optical fibers. The epoxy resin 5 does not have a basic structure of the ferrule.

Furthermore, Applicant respectfully submits that this is not taught or suggested by Hellman. Hellman discloses a ferrule made of glass. Since Hellman does not teach or suggest "a ferrule made of a synthetic resin", Applicant respectfully submits that Hellman does not in isolation or in combination with the other references teach or suggest the claimed invention.

Moreover, Umeki and Fukushima disclose a ferrule 2 and ferrules 61, 62, respectively, but neither Umeki nor Fukushima make mention of the material of the ferrules 2, 61, 62. Consequently, since Umeki and Fukushima do not teach or suggest "a ferrule made of a synthetic resin", Applicant respectfully submits that these references do not in isolation or in combination with the other references teach or suggest the claimed invention.

#### Summary

Applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims for patentability purposes, the reasons therefore, and arguments in support of the patentability of the pending claim set are presented above. Any claim amendments which are not specifically discussed in the above remarks are not made for patentability purposes, and the claims would satisfy the statutory requirements for patentability without the entry of such amendments. In addition, such amendments do not narrow the scope of the claims. Rather, these amendments have only been made to increase claim readability, to improve grammar, and to reduce the time and effort required of those in the art to clearly understand the scope of the claim language. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is

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specifically requested. If the Examiner has any questions which may be answered by telephone, he is invited to call the undersigned directly.

Respectfully submitted,

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